DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-000758 Address: 333 Burma Road **Date Inspected:** 04-Nov-2007

City: Oakland, CA 94607

OSM Arrival Time: 1300 **Project Name:** SAS Superstructure **OSM Departure Time:** 2230 Prime Contractor: American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: CWI Present: Yes No Xu Lefeng, Zhang Xu Liang **Inspected CWI report:** Yes **Rod Oven in Use:** Yes No N/A No N/A **Electrode to specification:** Yes No N/A Weld Procedures Followed: Yes No N/A **Oualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A **Approved Drawings:** Yes No N/A **Approved WPS:** Yes No Yes N/A **Delayed / Cancelled:** No

34-0006 **Bridge No: Component:** Caltrans Mock up

Summary of Items Observed:

Caltrans Quality Assurance (QA) Inspector, Dan Hernandez was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up 89.00, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island. Item Description Status

89M Diaphragm In Progress

Caltrans QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of fill passes on Diaphragm web plate's p721-1 to p138. The weld joint is a Partial Joint Penetration (PJP) double bevel T-joint in the 3G position. The approved welders Liu Guo Xuan #066279 and Shen Yong #066257 were using approved welding procedure specification WPS-B-T-3313-TC-P5. Caltrans QA Inspector measured current welding parameters at approximately 165 amps and 23.2 volts and 86 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. SMAW welding consumable is verified and identified as Excalibur HR4, classification E9018, 4 mm (.055 inches) diameter. ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Xu Lefeng and Bureau Veritas Inspector Mr. Zhang Xu Liang were observed monitoring welding activities at the work station.

Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

WELDING INSPECTION REPORT

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remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

| Inspected By: | Hernandez,Dan | Quality Assurance Inspector |
|---------------|----------------|-----------------------------|
| Reviewed By: | Cuellar,Robert | QA Reviewer |